ABSTRACT OF THE DISCLOSURE

A bipolar transistor structure for use in integrated circuits where the active device is processed on the sidewall of an *n*-hill so that the surface footprint does not depend on the desired area of active device region (emitter area). This structure, which is referred to as a Horizontal Current Bipolar Transistor (HCBT), consumes a smaller area of chip surface than conventional devices, thereby enabling higher packing density of devices and/or the reduction of integrated circuit die size. The device is fabricated with a single polysilicon layer, without an epitaxial process, without demanding trench isolation technology, and with reduced thermal budget. Fabrication requires fewer etching processes and thermal oxidations than in conventional devices.